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Remarks

Entry of the above-noted amendments, and reconsideration of the application and claims are respectfully requested pursuant to the concurrently filed Request of Continued Examination. The amendments to the claims constitute a bona fide attempt by applicants to advance prosecution of the application and obtain allowance of the claims. Amendments are made in view of applicants current view of the invention and should not be automatically interpreted as acquiescing to the substance of the rejections. Claims 1, 6, 10-12, and 14-28 are pending.

Claim Rejections - 35 U.S.C. 103

Claim 1 is amended by incorporating subject matter similar to that previously found in claim 9 (now canceled). Claim 9 was rejected under 35 U.S.C. 103 based on Lee in view of Espax and Goldberg, with the latter relied upon as teaching the subject matter further recited in dependent claim 9.

MPEP §706.02(j) states: "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

MPEP §2143.01 states: "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved, as a whole would have suggested to those of ordinary skill in the art. In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992)."

Claim 1 requires the assignment of uplink carriers and time slots for a first station through control messages that are received and processed only by the first station to which the uplink traffic channels are to be assigned. Goldberg was relied upon in the Office Action as teaching a similar limitation. Goldberg portions alleged to support this requirement were cited as column 6, line 66-column 7, line 53 and more specifically at column 7, lines 4-5 and 14-25. This reference is primarily directed to controlling the radiation pattern of an array of antenna elements at a central communication (base) station for transmitting signals to subscriber units.

Text 1 of Goldberg at column 6, line 66-column 7, line 5:

Another aspect of the invention disclosed herein is a method of simultaneously transmitting one or more downlinks signals from a communication station to one or more subscriber units over a single conventional channel with an overall desirable radiation pattern over a desired sector, each downlink signal having one or more intended subscriber units.

One of ordinary skill in the art would understand the Text 1 language to explain that downlink signals are transmitted from the base station to mobile units by an antenna to produce a desirable radiation pattern in a sector to reach the sector with the one or more intended subscriber units. In Goldberg, an "intended subscriber" means any and all subscribers that are in the same sector targeted for transmission by the antenna pattern from the base station. There is nothing in this language to reasonably suggest that such messages are received and processed only by the particular station to which the uplink traffic channels are to be assigned. All subscribers within the targeted transmission area, i.e. the targeted sector, in Goldberg would equally receive and/or process the communication.

Text 2 of Goldberg at column 7, lines 14-25:

The method includes selecting a set of desirable weight vectors designed for producing an overall desirable radiation pattern over a desired sector, the set including a desirable weight vector designed for transmitting to each intended subscriber unit. A range of azimuths or elevations or both define the desired sector. Typically but not necessarily, the overall desirable pattern is a NOR pattern. Each intended subscriber unit has a location that is (at least approximately) known, and these known locations are used in the selecting of the desirable weight vectors.

The Text 2 language describes that vectors are utilized to control the amount of power delivered to different antennas to result in a desirable radiation pattern. At least the approximate location of the subscribers intended to receive the transmission is known. The locations of the subscribers are used in selecting the vectors so that appropriate radiation pattern will be generated to reach the subscribers. This language describes that signals are directed to a particular sector where an intended subscriber is believed to be located. Goldberg is concerned with antenna pattern focusing so that communications can be maintained between the base station and mobile units at the minimum power needed. Thus, Goldberg addresses sending radio signals into regions with certain already known mobile users in that region. All subscribers in that sector will receive and process the transmission. One of ordinary skill in the art would not understand Goldberg as disclosing or suggesting that the assignment of uplink carriers and time slots be done through control messages that are received and processed only by the particular station to which the uplink traffic channels are to be assigned.

Claim 6 was rejected under 35 U.S.C. 103 as being obvious based on Lee in view of U.S. Patent No. 6, 714,514 to Espax. Claim 6 is rewritten in independent form and contains subject matter similar to the previously presented claim 6. Claim 6 recites that control is mapped to unidirectional channels and that control channel messages are transmitted in one burst by the unidirectional channels in the downlink band. Further, the control channel messages include assignment of uplink time slots to be used by the station.

The applied reference does not provide much, if any, teachings regarding how traffic channels are assigned or controlled. The feedback data which represents the quality of the received communications in Espax was equated in the Office Action with the burst control channel messages. Espax teaches that interference in downlink communications can be reduced by using spare capacity in uplink band frequencies to transmit feedback data; see column 2, lines 7-12. There is no teaching or suggestion in Espax of a control channel message that includes an assignment of uplink time slots to be used by the station.

The variable amount of capacity recited in column 9, lines 1-11, refers to available, i.e. unused, bandwidth in the uplink band that is utilized to transmit feedback data related to the quality of received communications. The amount of unused capacity, if any, will vary depending on the

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traffic load in the uplink frequencies. This language in Espax has nothing to do with the type of signaling or protocols used, and clearly provides no reasonable teaching with regard to a "burst" or "burst mode". A definition of burst mode from an IEEE dictionary was recited in the Office Action as "an operational mode in which an end node may send one or more packets each time it is granted permission to transmit". The fact that a variable amount of bandwidth may be available is not "a grant of permission to transmit" as required in the definition. The fact the some amount of available capacity may be present is not an invitation (permission to transmit) by one node for a transmission by the other node. What if there was no available capacity? Clearly the mere presence of available capacity cannot itself be an invitation to transmit, since this would interfere with possible transmission of other ongoing data.

It is to be noted that the IEEE dictionary is not relied upon as prior art in support of the subject rejection. It is evidently being cited to clarify what is meant by a term of art. Thus, it is not permissible to use it as part of the grounds for rejection. That is, the applied art must show all of the required limitations. Even with the meaning of "burst" as recited in the Office Action, Goldberg fails to provide an equivalent teaching to the control channel messages being transmitted via one burst as per claim 6. There are many communication systems with extra capacity. Having available capacity does not imply anything with regard to the type of communication protocol being used. Hence, one of ordinary skill in the art would not infer any particular transmission method merely in view of a desire to transmit feedback data using such excess capacity in one direction.

How feedback data is encoded into the available capacity bandwidth is not discussed in Espax. The available bandwidth could accept many types of communication methods including multiple independent or separated data transmissions. That is, there is nothing in Espax that would suggest the use of a single burst, or that "bursts" per se were used for feedback data transmission.

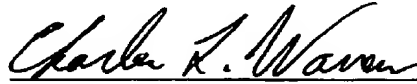
Claims 10-12 are amended similarly to limitations discussed with regard to claim 1, and are believed to be allowable for similar reasons explained for claim 1.

The remaining dependent claims are believed to be allowable since the base claim should be allowable.

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In view of the above amendments and remarks, allowance of all claims pending is respectfully requested. If a telephone conference would be of assistance in advancing the prosecution of this application, the Examiner is invited to call applicants' attorney.

Respectfully submitted,



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